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## CHECKLIST OF THE MOTHS OF GROVES WOODS PRESERVE, TRUMBULL COUNTY, OHIO (1988–1992) WITH ANALYSES OF ABUNDANCE

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### ABSTRACT

The biodiversity of moths at Groves Woods Preserve in Trumbull County, Ohio was studied by placing an ultraviolet light trap at the same location each year. The checklist tabulates five consecutive years of trapping (1988–1992) and includes 29,449 specimens representing 525 species. The study began in 1987 and continued through 1996, but only data for 1988–1992 are included here. The checklist is a historical record of the species that were present in 1988–1992 and the techniques used were designed so they can be duplicated in the future. The accumulation of species collected over time illustrates the importance of long-term studies. Species were still being added after ten years of trapping. The Shannon-Wiener Diversity Index for the moths collected in 1988–1992 is 6.81 and the Shannon-Wiener Evenness Index is 0.75. Two hundred twenty-one of the 525 species are widespread in northeast Ohio, having also been collected in Columbiana, Stark, and Ashland Counties. Of the 221 Groves species which are widespread, 77 had counts of 10 or fewer at Groves. Four species of owl moths that were collected at Groves are of special interest in Ohio. All specimens collected are deposited at The Cleveland Museum of Natural History, Cleveland, Ohio.

### Introduction

The objective of this study was to document the population changes of native moths for ten years at several sites within the drainage basin of the Grand River in Trumbull, Ashtabula, and Lake Counties, Ohio, during gypsy moth invasion and control. This is the third in a series of six checklists that tabulate the moths collected at each site during 1988–1992.

Over this same period, the population of the gypsy moth increased in the entire drainage basin. Pheromone trap catches of male gypsy moths increased at Groves Woods Preserve from  $50 \pm 16(2)$  per trap in 1987 [mean  $\pm$  standard error (number of traps)], to  $51 \pm 18(4)$  in 1988,  $256 \pm 35(3)$  in 1989,  $137 \pm 16(4)$  in 1990, and  $189 \pm 10(4)$  in 1991. Pheromone trapping was discontinued after 1991. Ultraviolet-light-trap catches of male gypsy moths also increased, from 1 in 1987, to 25 in 1988, 84 in 1989, 109 in 1990, 43 in 1991, and 90 in 1992, but noticeable defoliation was not observed at Groves Woods Preserve.

The overall study provides baseline data on pre-outbreak moth diversity, as well as data on the impact of gypsy moth control agents.

### Description of the Surveillance Site at Groves Woods Preserve

Groves Woods, a preserve of The Cleveland Museum of Natural History, is composed of 62.7 ha of beech-maple mixed, hardwood forest (Bissell, 1998) and is bordered by Girdle Road on the west and Sweet Road on the north (Figure 1). Garden Creek transects the woods (Anonymous, 1995). The Preserve is situated on Hiram Till, ground moraine, and end moraine (White, 1982, p. 47, Pl. 1).

The light trap at Groves Woods was located in Mesopotamia Township in Trumbull County on Girdle Road at latitude  $41^{\circ} 29' 04''$  N and longitude  $80^{\circ} 58' 17''$  W (U.S. Geological Survey West Farmington, Ohio, 7.5-minute quadrangle topographic map; Figure 1).

Groves Woods is located approximately 22 km southeast of the National Oceanic and Atmospheric Administration weather station at Chardon. The station at Chardon measured an average temperature of  $9^{\circ}$  Celsius, an average annual precipitation of 120 cm, and an average annual snowfall of 220 cm for 1988–1992.

The composition of the canopy and understory was evaluated for the  $2500 \text{ m}^2$  of forest centered on the surveillance trap (point-quarter technique, nine points;

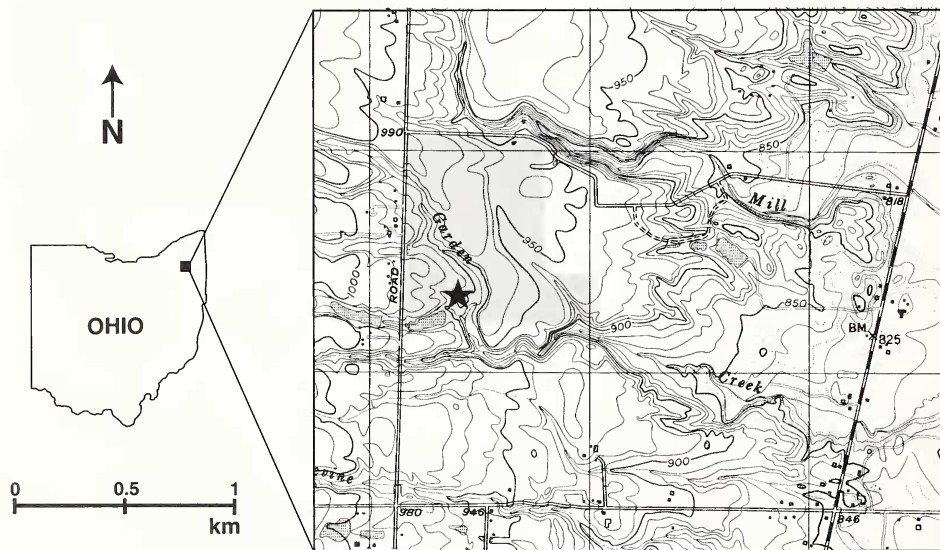


Figure 1. Map of the study area (adapted from the U.S. Geological Survey West Farmington, Ohio, 7.5-minute quadrangle topographic map). Shaded area delineates Groves Woods Preserve; star indicates position of surveillance trap within the Preserve.

**Table 1.** Importance values for trees at the surveillance site at Groves Woods. The inventory included all woody stems with a circumference of five or more cm. A stem was counted as canopy only if it reached the uppermost layer of vegetation. Author citations according to Kartesz (1994); common names according to Weishaupt (1971).

Tree Species		Canopy	Understory
Oak, northern red	<i>Quercus rubra</i> L.	141	0
Maple, sugar	<i>Acer saccharum</i> Marsh	53	131
Beech, American	<i>Fagus grandifolia</i> Ehrh.	48	113
Maple, red	<i>Acer rubrum</i> L.	25	9
Oak, white	<i>Quercus alba</i> L.	25	9
Cherry, black	<i>Prunus serotina</i> Ehrh.	8	0
Hornbeam, American	<i>Carpinus caroliniana</i> Walt.	0	11
Dogwood, flowering	<i>Cornus florida</i> L.	0	10
Hop Hornbeam, eastern	<i>Ostrya virginiana</i> (Mill.) K. Koch	0	9
Rhododendron, domestic	<i>Rhododendron</i> sp.	0	8

Cottam and Curtis, 1956; Cox, 1980). The area used for the evaluation, 0.25 ha, is smaller than the area from which the moths are drawn. The light was visible to human eyes at distances of 80–90 m at Groves Woods. The importance values for the trees at the surveillance site at Groves Woods are given in Table 1.

The herbaceous plants and small shrubs included the spindle tree *Euonymus obovatus* Nutt. and blueberry *Vaccinium pallidum* Ait. (James K. Bissell, personal communication, 1998; author citations according to Kartesz, 1994). These species were selected from a longer list of Groves species on deposit in the Herbarium at The Cleveland Museum of Natural History. The surveillance trap was within 600 m of a pasture and within 300 m of a pond.

### Surveillance Techniques

One Elliscope®-type ultraviolet light trap (15 watt, BL) was operated at the same location each year, from late May through September. The light was controlled by a timer from 7 p.m. to 8 a.m., eastern daylight time. The trap was set up before 7 p.m. the evening of operation and emptied after 8 a.m. the next morning. Two killing agents, potassium cyanide and ethyl acetate, were used during each collecting period. Using both improved the condition of the moths in the catch as compared to using only one or the other. Collections were made one week apart regardless of weather. The entire catches were sorted and archived in cellophane envelopes and all data were computerized. All the specimens collected are deposited in the Insect Collection at The Cleveland Museum of Natural History.

### Results and Discussion

A total of 29,449 specimens representing 525 species were collected in 1988–1992 (Appendix). Species were

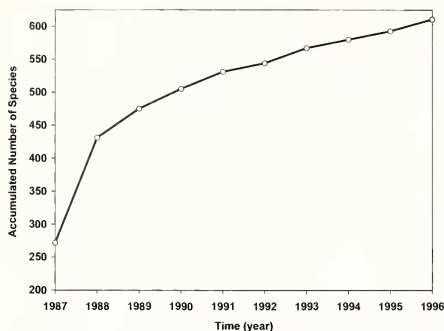
identified using Covell (1984), Ferguson (1985), Forbes (1923; 1948; 1954; 1960), Holland (1922), Rings et al. (1992), and Rockburne and Lafontaine (1976). Nomenclature for the Noctuidae was updated from that used by Hodges et al. (1983) to that used by Rings et al. (1992; after Poole, 1989). Crambidae is used according to Scholtens (1996). There are 33 species that have been designated as plus-groups (+). These are species that are easily confused with closely related species; the count for a plus group may therefore include individuals from more than one species.

The accumulation of species collected over time, from 1987 to 1996, is shown in Figure 2. In 1987 (not included in this checklist), 272 species were collected, and in 1996, after ten years, the total had reached 611 (1993–1996, also not included in this checklist). Figure 2 illustrates the importance of long-term studies. One or two years of monitoring would not have been long enough to estimate moth biodiversity at Groves Woods and five years would have been a minimum. The species accumulation curve was still rising after ten years of sampling. Rings and Metzler (1989) estimated that 600 to 1000 moth species may be sampled in a locality with high host plant diversity if collections are made at frequent intervals over five or more years. Our data are consistent with that assertion. It is expected that the asymptote of the curve is well above 600 species since a number of categories of moths are missing from our checklist: fall, winter, and early spring moths are missing because collecting was not begun until the end of May and collecting ended in September. Some species of moths are poorly sampled by light trapping. Also, many Microlepidoptera that were collected are not included because of the difficulty of identifying them.

Our checklist is a historical record of the moth species that were present in 1988–1992. The techniques were designed so that they can be duplicated in the future to document the changes in moth diversity that follow changes in land use and weather.

Relative abundances of the 525 species are shown in Figure 3. The Shannon-Wiener Diversity function was used to measure species diversity (Krebs, 1994). This index takes into account both the number of species and the manner in which the individuals are distributed among the species. A greater number of species increases the index and a more even distribution of individuals among the species also increases the index. Evenness can vary from zero to one and an evenness of one indicates that all species have the same number of individuals. The Shannon-Wiener Diversity Index is 6.81 and the Shannon-Wiener Evenness Index is 0.75.

Over 13 percent of the total count was composed of lesser maple spanworm moth *Itame pustularia* (6273). The next most abundant species was American ermine



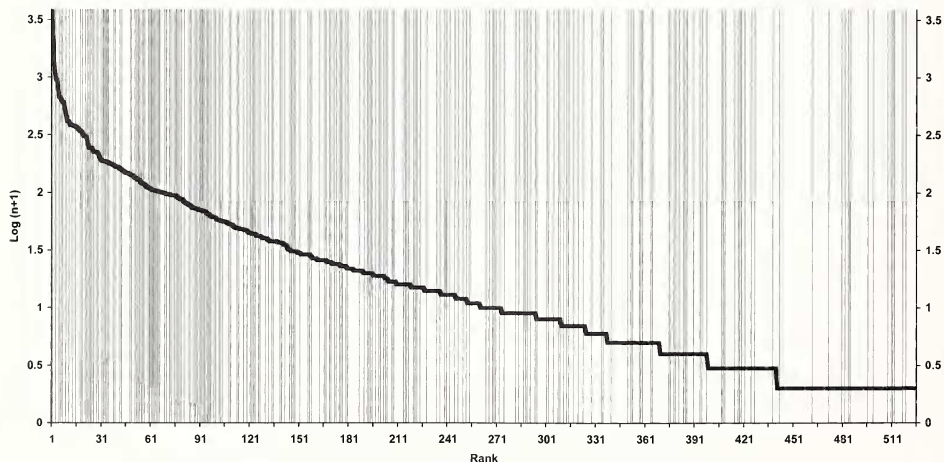
**Figure 2.** Plot of the annual accumulation of species collected at Groves Woods Preserve, 1987–1996.

moth *Yponomeuta multipunctella* (2420) whose larva feeds on euonymus. Following, in order of decreasing abundance, were: forest tent caterpillar moth *Malacosoma disstria* (7698) whose larva feeds on trees and shrubs, especially aspens and maples; sod webworm *Crambus agitatellus* (5362+) whose larva feeds on grasses and low plants; greater black-letter dart *Xestia dolosa* (10942.1+) whose larva feeds on apple, clover, maples, etc.; agreeable tiger moth *Spilosoma congrua* (8134) whose larva feeds on herbaceous plants; banded tussock moth

*Halysidota tessellaris* (8203+) whose larva feeds on many deciduous trees; rotund idia *Idia rotundalis* (8326) whose larva feeds on dead coral fungus and dead leaves; disparaged arches *Polia detracta* (10288+) whose larva feeds on clover, blueberries, oaks, etc.; and leafroller moth *Choristoneura fractivittana* (3632) whose larva feeds on apple, beeches, birches, etc.

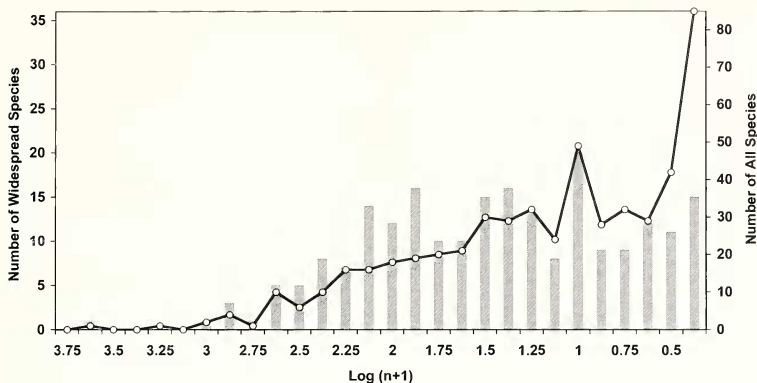
Figure 3 also indicates, with a vertical line, every species that had been collected at single locations in Columbiana County (Rings and Metzler, 1992), Stark County (Rings et al., 1987), and Ashland County (Rings and Metzler, 1989). A total of 221 Groves species have been collected at all four sites and can be considered to be widespread in northeast Ohio. Data on a wide variety of plants and animals show a broad positive correlation between abundance and distribution (Gaston, 1988; 1990). Three explanations have been proposed (Krebs, 1994). First, the relationship is an artifact of sampling because rarer species are less likely to be found. Second, species that use a restricted variety of resources are less likely to be abundant and widespread. And third, species that disperse more are more common and widespread. Our data (Figure 3) suggest that a positive correlation between abundance and distribution does not exist, when abundance is viewed from the perspective of abundance at Groves. Of the 221 Groves species which are widespread in northeast Ohio, 77 had total counts of 10 or fewer at Groves.

Overall, there is a close correspondence between the



**Figure 3.** Plot of the logarithm of abundance versus rank. Vertical lines indicate species that are widespread in northeast Ohio. Species collected at Groves Woods Preserve, 1988–1992.





**Figure 4.** Correspondence between the total number of Groves species in an abundance interval (line, scale at right) and the number of widespread Groves species in the same abundance interval (bar, scale at left). Note that the y-axis scale for the widespread species is larger than the y-axis scale for the total number of species.

number of widespread species in an abundance interval and the total number of species (Figure 4). Only the decrease in the proportion of widespread species in the singleton interval conforms to expectation. The 85 singleton species at Groves include only 15 widespread species whereas the 42 doubleton species include 11 widespread species.

Four species of owlet moths collected at Groves are listed as being of special interest in Rings et al. (1992): formosa looper moth *Chrysanypha formosa* (8904) whose larva feeds on blueberry and huckleberry; airy apamea *Apamea vultuosa* (9341) whose larva feeds on grasses; bridgham's brocade *Oligia bridghami* (9415) whose larval host is unrecorded; and scurfy quaker *Homorthodes fufurata* (10532) whose larva feeds on maples.

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#### References

- Anonymous. 1995. Trumbull County Plat Directory, Ohio. Dayton, Great Mid-Western Publishing Co. 156 p.
- Bissell, J. K. 1998. Preserve Directory of The Cleveland Museum of Natural History. Natural Areas Division. 21 p.
- Cottam, G., and J. T. Curtis. 1956. The use of distance measures in phytosociological sampling. *Ecology*, 37:451-460.
- Covell, C. V., Jr. 1984. A Field Guide to the Moths of Eastern North America. Boston, Houghton-Mifflin. 496 p.
- Cox, G. W. 1980. Laboratory Manual of General Ecology. Fourth edition. Dubuque, Brown. 232 p.
- Ferguson, D. C. 1985. The Moths of America North of Mexico Including Greenland. Fascicle 18.1, Geometroidea: Geometridae (part). Washington, Wedge Entomological Research Foundation. 131p.
- Forbes, W. T. M. 1923-1960. Lepidoptera of New York and neighboring states. Cornell University Agricultural Experiment Station Memoir 68 (Part I, 1923), Memoir 274 (Part II, 1948), Memoir 329 (Part III, 1954) and Memoir 371 (Part IV, 1960).
- Gaston, K. J. 1988. Patterns in the local and regional dynamics of moth populations. *Oikos*, 53:49-57.
- Gaston, K. J. 1990. Patterns in the geographical ranges of species. *Biological Reviews*, 65:105-129.
- Hodges, R. W., T. Dominick, D. R. Davis, D. C. Ferguson, J. G. Franclemont, E. G. Munroe, and J. A. Powell (eds.). 1983. Check List of the Lepidoptera of America North of Mexico. London, E. W. Classey, and Washington, Wedge Entomological Research Foundation. 284 p.
- Holland, W. J. 1922. The Moth Book. Reprinted 1968 with updating by A. E. Brower. New York, Dover Press. 479 p.

- Kartesz, J. T. 1994. A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland. Second edition. Portland, Timber Press. 1438 p. (2 volumes)
- Krebs, C. J. 1994. Ecology: The Experimental Analysis of Distribution and Abundance. Fourth edition. New York, HarperCollins. 801 p.
- Poole, R. W. 1989. Lepidopterorum Catalogus (new series) Fascicle 118: Noctuidae. Leiden, E. J. Brill. 1314 p. (3 volumes)
- Rings, R. W., and E. H. Metzler. 1989. A preliminary checklist of the Lepidoptera of Mohican State Forest and Mohican State Park, Ashland County, Ohio. Ohio Journal of Science, 89(4):78-88.
- Rings, R. W., and E. H. Metzler. 1992. A check list of the Lepidoptera of Beaver Creek State Park, Columbiana County, Ohio. The Great Lakes Entomologist, 25(2):115-131.
- Rings, R. W., E. H. Metzler, F. J. Arnold, and D. H. Harris. 1992. The owl moths of Ohio. Ohio Biological Survey, New Series, Bulletin, 9(2):1-219.
- Rings, R. W., R. M. Ritter, R. W. Hawes, and E. H. Metzler. 1987. A nine-year study of the Lepidoptera of the Wilderness Center, Stark County, Ohio. Ohio Journal of Science, 87(3):55-61.
- Rockburne, E. W., and J. D. Lafontaine. 1976. The cutworm moths of Ontario and Quebec, Ottawa, Ontario. Canada Department of Agriculture Research Publication 1593:1-164.
- Scholtens, B. 1996. Moths of the Douglas Lake region (Emmet and Cheboygan Counties), Michigan: V. Crambidae and Pyralidae (Lepidoptera). The Great Lakes Entomologist, 29(3):141-160.
- Weishaupt, C. G. 1971. Vascular Plants of Ohio. Third edition. Dubuque, Kendall/Hunt. 293 p.
- White, G. W. 1982. Glacial geology of northeastern Ohio. Ohio Division of Geological Survey Bulletin 68. 75 p.

**Appendix.** Checklist of species collected at Groves Woods Preserve, 1988–92. Numbers preceding the species names are checklist numbers from Hodges et al. (1983). A plus-group (+) is a species that is easily confused with closely related species. Following the checklist number is the species name including author (abbreviations as listed in Hodges et al., 1983), date of collection, and count of specimens collected. When more than one collection date is listed, the first is the earliest seasonal date of collection and the second is the latest, both with the year in which that occurred. The count is the total number of specimens collected in 1988–1992.

# Family TINEIDAE

- 372+ *Acrolophus phumfrontella* (Clem.)  
July 22, 1988 ..... Count 1

# Family OECOPHORIDAE

- 882 *Agonopterix robinella* (Pack.)  
June 4–Aug. 21, 1989 ..... Count 46  
957 *Psilocorsis reflexella* Clem.  
May 28, 1989–July 8, 1988 ..... Count 20  
1014+ *Antaeotricha leucitana* (Zell.)  
May 18, 1988–Sep. 2, 1989 ..... Count 246  
1046 *Callima argenticinctella* Clem.  
July 13–Aug. 3, 1990 ..... Count 9

# Family GELECHIIDAE

- 2295 *Trichotape flavocostella* (Clem.)  
June 20, 1991–Aug. 3, 1990 ..... Count 15

# Family YPONOMEUTIDAE

- 2401 *Atteva punctella* (Cram.)  
July 5, 1991 ..... Count 1  
2420 *Yponomeuta multipunctella* Clem.  
June 13, 1991–Aug. 26, 1988 ..... Count 1336

# Family SESIIDAE

- 2554 *Synanthedon acerni* (Clem.)  
July 22–Aug. 5, 1988 ..... Count 2

# Family TORTRICIDAE

- 3186 *Epiblema scudderiana* (Clem.)  
June 1, 1988 ..... Count 1  
3361 *Ancylis semiovana* (Zell.)  
June 1, 1988 ..... Count 4  
3494 *Melioscopus latiferreanus* (Wlsm.)  
Aug. 14–Sep. 9, 1989 ..... Count 5  
3503 *Croesia semipurpurea* (Kft.)  
June 15, 1988–July 4, 1989 ..... Count 24  
3504 *Croesia curvalana* (Kft.)  
June 26, 1989 ..... Count 3  
3594 *Pandemis limitata* (Rob.)  
June 1, 1988–Sep. 14, 1990 ..... Count 24  
3597 *Argyrotaenia velutinana* (Wlk.)  
July 29, 1988 ..... Count 28  
3623 *Argyrotaenia quercifoliana* (Fitch)  
June 6, 1991–July 24, 1992 ..... Count 23  
3624 *Argyrotaenia alisellana* (Rob.)  
June 15, 1990–June 20, 1991 ..... Count 2  
3625 *Argyrotaenia mariana* (Fern.)  
May 18, 1988 ..... Count 1  
3632 *Choristoneura fractivittana* (Clem.)  
June 1, 1990–July 4, 1989 ..... Count 414

- 3633 *Choristoneura parallela* (Rob.)  
July 10, 1989–Aug. 31, 1990 ..... Count 12  
3635 *Choristoneura rosaceana* (Harr.)  
June 12, 1989–Sep. 14, 1990 ..... Count 37  
3648 *Archips argyrospila* (Wlk.)  
June 22–July 13, 1990 ..... Count 13  
3686 *Clepsis melaleucana* (Wlk.)  
June 1, 1988–June 26, 1989 ..... Count 36  
3720 *Sparganothis reticulatana* (Clem.)  
June 26–Aug. 21, 1989 ..... Count 4  
3725 *Sparganothis pettiitana* (Rob.)  
June 29, 1990–July 31, 1989 ..... Count 11  
3748 *Amorbia humerosana* Clem.  
June 1, 1988 ..... Count 1

# Family LIMACODIDAE

- 4652 *Tortricidia testacea* Pack.  
June 1, 1988–June 26, 1989 ..... Count 94  
4654 *Tortricidia flexuosa* (Grt.)  
June 6, 1991–July 22, 1988 ..... Count 100  
4659 *Packardia geminata* (Pack.)  
June 1–July 15, 1988 ..... Count 13  
4661 *Packardia elegans* (Pack.)  
June 6, 1991–July 13, 1990 ..... Count 14  
4665 *Lithacodes fasciola* (H.-S.)  
June 27, 1991–July 29, 1988 ..... Count 39  
4667 *Apoda y-inversum* (Pack.)  
June 15, 1988–July 24, 1989 ..... Count 10  
4669 *Apoda biguttata* (Pack.)  
June 15–June 22, 1988 ..... Count 8  
4671 *Prolinacodes badia* (Hbn.)  
June 27, 1991–July 20, 1990 ..... Count 8  
4681 *Isa textula* (H.-S.)  
June 6, 1991–July 10, 1989 ..... Count 5  
4685 *Adoneta spinuloides* (H.-S.)  
June 22, 1988–July 20, 1990 ..... Count 8  
4697 *Euclea delphinii* (Bdv.)  
June 19, 1989–July 8, 1988 ..... Count 11

# Family CRAMBIDAE

- 4703 *Gesneria centuriella* (D. & S.)  
June 1, 1988–Aug. 21, 1989 ..... Count 223  
4748 *Munroessa icciusalis* (Wlk.)  
June 1, 1988–Sep. 9, 1989 ..... Count 16  
4751 *Munroessa gyralis* (Hulst)  
June 8, 1990–Sep. 9, 1989 ..... Count 3  
4889 *Dicynolomia julianalis* (Wlk.)  
June 26, 1989–July 15, 1988 ..... Count 8  
4897 *Evergestis pallidata* (Hufn.)  
June 5, 1992–Sep. 13, 1991 ..... Count 55

4936	<i>Saucrobotys futilalis</i> (Led.)	
	Aug. 2, 1991	Count 3
4937	<i>Nascia acutella</i> (Wlk.)	
	July 10, 1989	Count 1
4944	<i>Crocidophora serratisimalis</i> Zell.	
	June 13, 1991–Sep. 2, 1989	Count 197
4945	<i>Crocidophora tuberculalis</i> Led.	
	June 20, 1991–Aug. 7, 1992	Count 28
4949	<i>Ostrinia nubilalis</i> (Hbn.)	
	June 1, 1988–Sep. 13, 1991	Count 102
4950	<i>Fumiborys fumalis</i> (Gn.)	
	July 29, 1988–Sep. 4, 1992	Count 6
4953a	<i>Phlyctaenia coronata tertialis</i> (Gn.)	
	June 5–Sep. 4, 1992	Count 15
4962	<i>Hahncappisia marculenta</i> (G. & R.)	
	June 1–Aug. 26, 1988	Count 13
5040	<i>Pyrausta bicoloralis</i> (Gn.)	
	June 6, 1991–Aug. 24, 1990	Count 18
5071	<i>Pyrausta acronialis</i> (Wlk.)	
	June 6–Sep. 21, 1991	Count 8
5079	<i>Udea rubigalis</i> (Gn.)	
	June 4, 1989–Sep. 25, 1992	Count 153
5142	<i>Diacme elealis</i> (Wlk.)	
	June 20, 1991–Aug. 21, 1992	Count 94
5156	<i>Nomophila nearctica</i> Mun.	
	June 4–Sep. 9, 1989	Count 12
5159	<i>Desmia funeralis</i> (Hbn.)	
	June 19–Sep. 9, 1989	Count 43
5160	<i>Desmia maculalis</i> Westwood	
	July 12, 1991–Aug. 9, 1990	Count 2
5182	<i>Blepharomastix ranalis</i> (Gn.)	
	June 26, 1989–July 24, 1988	Count 4
5226	<i>Palpita magniferalis</i> (Wlk.)	
	June 1, 1988–Aug. 23, 1991	Count 79
5228	<i>Polygrammodes flavidalis</i> (Gn.)	
	June 20, 1991–Aug. 26, 1988	Count 70
5229	<i>Polygrammodes langdonalis</i> (Grt.)	
	July 8, 1988	Count 2
5241	<i>Pantographa limata</i> (G. & R.)	
	June 20, 1991–Sep. 4, 1992	Count 188
5272	<i>Herpetogramma bipunctalis</i> (F.)	
	June 22, 1988–Aug. 21, 1989	Count 35
5275	<i>Herpetogramma pertextalis</i> (Led.)	
	July 10–Aug. 21, 1989	Count 41
5280	<i>Herpetogramma aeglealis</i> (Wlk.)	
	July 3, 1992–Aug. 2, 1991	Count 57
5281	<i>Pilocrocis ramentalis</i> Led.	
	July 22, 1988	Count 1
5362+	<i>Crambus agitatellus</i> Clem.	
	June 1–Sep. 24, 1988	Count 922
5392	<i>Arequipa turbatella</i> Wlk.	
	Aug. 7, 1992	Count 1
5403	<i>Agriphila vulgivalis</i> (Clem.)	
	Aug. 23, 1991–Sep. 4, 1992	Count 4
5464	<i>Urola nivalis</i> (Drury)	
	June 15, 1990–Aug. 7, 1992	Count 61
5465	<i>Vaxi auratella</i> (Clem.)	
	July 15, 1988–July 27, 1990	Count 5
5466	<i>Vaxi critica</i> (Fbs.)	
	July 22, 1988	Count 1

**Family PYRALIDAE**

5517	<i>Aglossa caprealis</i> (Hbn.)	
	July 5, 1991	Count 2
5518	<i>Aglossa cuprina</i> Zell.	
	June 6, 1991–Aug. 31, 1990	Count 177
5524	<i>Hypsopygia costalis</i> (F.)	
	June 22–July 22, 1988	Count 21
5532	<i>Herculia infimbrialis</i> Dyar	
	July 13, 1990–July 31, 1989	Count 3
5552	<i>Galasa nigrinodis</i> (Zell.)	
	July 4, 1989–July 5, 1991	Count 2
5556	<i>Tosale oviplagalis</i> (Wlk.)	
	June 19, 1989–July 27, 1990	Count 28
5571	<i>Condylolomia participalis</i> Grt.	
	June 13, 1991–July 20, 1990	Count 140
5577	<i>Epipaschia superatalis</i> Clem.	
	June 27, 1991–July 10, 1989	Count 4
5606	<i>Tetralopha asperatella</i> (Clem.)	
	June 29–Aug. 9, 1990	Count 4
5622	<i>Galleria mellonella</i> (L.)	
	Sep. 13, 1991	Count 1
5997	<i>Eucophora ostricorella</i> Hulst	
	July 8, 1988–Aug. 3, 1990	Count 4
6053	<i>Peoria approximella</i> (Wlk.)	
	June 12, 1992–July 15, 1988	Count 9

**Family THYRIDIDAE**

6079	<i>Dysodia granulata</i> (Neum.)	
	June 26–Aug. 21, 1989	Count 8

**Family THYATRIDAE**

6235	<i>Habrosyne scripta</i> (Gosse)	
	May 30, 1991–June 15, 1988	Count 3
6237	<i>Pseudothyatira cymatophoroides</i> (Gn.)	
	June 26, 1989–Aug. 5, 1988	Count 7

**Family DREPANIDAE**

6251	<i>Drepana arcuata</i> Wlk.	
	June 15, 1988	Count 2
6255	<i>Oreta rosea</i> (Wlk.)	
	May 30, 1991–Aug. 31, 1990	Count 6

**Family GEOMETRIDAE**

6261	<i>Helionota cycladata</i> G. & R.	
	June 15–June 22, 1988	Count 3
6270	<i>Protitame virginialis</i> (Hulst)	
	July 19, 1991–Aug. 5, 1988	Count 2
6272	<i>Eumacaria latiferrugata</i> (Wlk.)	
	July 19, 1991	Count 1
6273	<i>Itame pustularia</i> (Gn.)	
	June 13–Sep. 21, 1991	Count 3897
6299	<i>Itame coortaria</i> (Hulst)	
	May 18, 1988–July 17, 1992	Count 20
6303	<i>Itame subcessaria</i> (Wlk.)	
	June 27, 1991–July 15, 1988	Count 8
6335+	<i>Semiothisa acquiferaria</i> (Wlk.)	
	May 18, 1988–Sep. 9, 1988	Count 104
6342	<i>Semiothisa bisignata</i> (Wlk.)	
	July 4, 1989–July 15, 1988	Count 6
6344+	<i>Semiothisa signaria</i> (Hbn.)	
	May 28, 1992–Sep. 9, 1989	Count 76

6386	<i>Semiothisa ocellinata</i> (Gn.) June 27, 1991–Aug. 19, 1988 . . . . .	Count 25	6823	<i>Metarranthis angularia</i> B. & McD. June 8–June 22, 1988 . . . . .	Count 4
6405	<i>Semiothisa gnophosaria</i> (Gn.) June 22–Aug. 24, 1990 . . . . .	Count 21	6825	<i>Metarranthis indeclinata</i> (Wlk.) May 28–June 19, 1992 . . . . .	Count 13
6583	<i>Anacamptodes ephyriaria</i> (Wlk.) June 27, 1991–July 24, 1989 . . . . .	Count 44	6826	<i>Metarranthis hypocharia</i> (H.-S.) May 30, 1991–June 26, 1989 . . . . .	Count 88
6584	<i>Anacamptodes humaria</i> (Gn.) July 5–Aug. 23, 1991 . . . . .	Count 4	6827	<i>Metarranthis refractaria</i> (Gn.) June 12–July 3, 1992 . . . . .	Count 4
6586	<i>Anacamptodes defectaria</i> (Gn.) July 13, 1990 . . . . .	Count 1	6834	<i>Cepphis decoloraria</i> (Hulst) June 19, 1989–July 8, 1988 . . . . .	Count 3
6588	<i>Iridopsis larvaria</i> (Gn.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 56	6835	<i>Cepphis armataria</i> (H.-S.) June 13, 1991–July 8, 1988 . . . . .	Count 4
6590	<i>Anavitrinella pampinaria</i> (Gn.) May 30, 1991–Sep. 24, 1988 . . . . .	Count 70	6836	<i>Anagoga occiduaris</i> (Wlk.) May 18, 1988–Aug. 9, 1990 . . . . .	Count 10
6597	<i>Ectropis crepuscularia</i> (D. & S.) June 13, 1991–Sep. 14, 1990 . . . . .	Count 120	6838+	<i>Probole amicaria</i> (H.-S.) May 21, 1989–Aug. 16, 1990 . . . . .	Count 132
6598	<i>Protoboarmia porcellaria</i> (Gn.) June 6–Sep. 13, 1991 . . . . .	Count 31	6839	<i>Probole nepiasaria</i> (Wlk.) July 12, 1991 . . . . .	Count 1
6599	<i>Epimecis hortaria</i> (F.) May 18, 1988–July 27, 1990 . . . . .	Count 43	6840	<i>Plagodis serinaria</i> H.-S. May 18–June 22, 1988 . . . . .	Count 186
6620+	<i>Melanolophia canadaria</i> (Gn.) May 18, 1988–Sep. 21, 1991 . . . . .	Count 225	6841	<i>Plagodis kuetzingi</i> (Grt.) June 4, 1989–July 19, 1991 . . . . .	Count 6
6638	<i>Eufidonia notataria</i> (Wlk.) June 4, 1989–June 5, 1992 . . . . .	Count 2	6842	<i>Plagodis phlogosaria</i> (Gn.) July 8, 1988–July 24, 1989 . . . . .	Count 8
6640a	<i>Biston betularia cognataria</i> (Gn.) June 26, 1989–Aug. 2, 1991 . . . . .	Count 5	6843	<i>Plagodis fervidaria</i> (H.-S.) July 12, 1991–Aug. 21, 1989 . . . . .	Count 4
6654	<i>Hypagyrtis unipunctata</i> (Haw.) June 5, 1992–Aug. 24, 1990 . . . . .	Count 39	6844	<i>Plagodis alcoolaria</i> (Gn.) May 18, 1988–Aug. 2, 1991 . . . . .	Count 110
6655	<i>Hypagyrtis esther</i> (Barnes) May 30, 1991–Sep. 14, 1990 . . . . .	Count 310	6863	<i>Caripeta divisata</i> Wlk. June 29, 1990–Aug. 16, 1991 . . . . .	Count 20
6667	<i>Lomographa vestaliata</i> (Gn.) May 28, 1992–June 29, 1990 . . . . .	Count 117	6884	<i>Besma endropiaria</i> (G. & R.) May 28, 1992–Aug. 24, 1990 . . . . .	Count 96
6677	<i>Cabera erythemaria</i> Gn. May 30, 1991–Sep. 2, 1989 . . . . .	Count 73	6885	<i>Besma quercivoraria</i> (Gn.) May 18, 1988–Aug. 24, 1990 . . . . .	Count 48
6678	<i>Cabera variolaria</i> Gn. May 30, 1991–Aug. 14, 1989 . . . . .	Count 7	6892	<i>Lambdina pellucidaria</i> (G. & R.) May 18, 1988 . . . . .	Count 2
6720	<i>Lytrosia unitaria</i> (H.-S.) June 6, 1991–July 10, 1989 . . . . .	Count 50	6906	<i>Nepytia canosaria</i> (Wlk.) Sep. 25, 1992 . . . . .	Count 1
6724	<i>Euchlaena serrata</i> (Drury) July 3, 1992–July 20, 1990 . . . . .	Count 7	6912	<i>Sicya macularia</i> (Harr.) June 22, 1988–July 10, 1992 . . . . .	Count 16
6725	<i>Euchlaena mucaria</i> (Wlk.) May 30, 1991–July 4, 1989 . . . . .	Count 26	6941	<i>Eusarca confusaria</i> Hbn. June 12, 1989–Sep. 10, 1992 . . . . .	Count 37
6729	<i>Euchlaena johnsonaria</i> (Fitch) June 12, 1989–Aug. 26, 1988 . . . . .	Count 3	6963	<i>Tetracis crocallata</i> Gn. June 15–July 8, 1988 . . . . .	Count 8
6737	<i>Euchlaena tigrinaria</i> (Gn.) Aug. 5–Aug. 19, 1988 . . . . .	Count 2	6964	<i>Tetracis cachexiata</i> Gn. May 18, 1988–Aug. 23, 1991 . . . . .	Count 244
6739	<i>Euchlaena irroraria</i> (B. & McD.) May 30, 1991–June 19, 1989 . . . . .	Count 5	6965	<i>Engonobapta nivosa</i> (Gn.) June 13–Sep. 13, 1991 . . . . .	Count 167
6740+	<i>Xanthotype urticaria</i> Swett May 30, 1991–Aug. 24, 1990 . . . . .	Count 22	6966	<i>Eutrapela clemataria</i> (J.E. Smith) May 18, 1988–Sep. 14, 1990 . . . . .	Count 101
6753+	<i>Pero honestaria</i> (Wlk.) May 21–Sep. 2, 1989 . . . . .	Count 128	6982	<i>Prochoerodes transversata</i> (Drury) June 20, 1991–Sep. 25, 1992 . . . . .	Count 107
6796	<i>Campaea perlata</i> (Gn.) May 30, 1991–Sep. 24, 1988 . . . . .	Count 382	6987	<i>Antepione thisoaria</i> (Gn.) June 1, 1990–Aug. 14, 1989 . . . . .	Count 12
6798	<i>Ennomos subsignaria</i> (Hbn.) June 20, 1991–Aug. 21, 1992 . . . . .	Count 167	7009	<i>Nematocampa limbata</i> (Haw.) June 20, 1991–Sep. 7, 1990 . . . . .	Count 55
6819	<i>Metanema inatomaria</i> Gn. June 1, 1988–Aug. 24, 1990 . . . . .	Count 4			
6822	<i>Metarranthis duaria</i> (Gn.) June 15, 1988 . . . . .	Count 1			



7033	<i>Nemoria lixaria</i> (Gn.) June 8, 1988. . . . .	Count 1
7046+	<i>Nemoria bistriaria</i> Hbn. May 28, 1989–Aug. 27, 1992. . . . .	Count 37
7047	<i>Nemoria rubrifrontaria</i> (Pack.) June 1, 1988. . . . .	Count 1
7048	<i>Nemoria minusaria</i> (Gn.) May 28, 1992–June 19, 1989. . . . .	Count 7
7053	<i>Dichorda iridaria</i> (Gn.) June 4, 1989–July 31, 1992. . . . .	Count 6
7058	<i>Synchlora aerata</i> (F.) May 30–Aug. 30, 1991. . . . .	Count 13
7071	<i>Chlorochlamys chloroleucaria</i> (Gn.) June 1–July 8, 1988. . . . .	Count 2
7084	<i>Hethemia pistasciaria</i> (Gn.) June 22, 1988. . . . .	Count 1
7132	<i>Pleuroprucha insularia</i> (Gn.) June 20, 1991–Sep. 9, 1989. . . . .	Count 47
7136	<i>Cyclophora packardii</i> (Proust) May 30, 1991–Sep. 10, 1988. . . . .	Count 26
7139	<i>Cyclophora pendulinaria</i> (Gn.) Aug. 2, 1991. . . . .	Count 2
7146	<i>Haematopsis grataria</i> (F.) June 27, 1991–Sep. 9, 1989. . . . .	Count 6
7157	<i>Scopula cacuminiaria</i> (Morr.) June 12, 1989–Aug. 2, 1991. . . . .	Count 2
7159	<i>Scopula limboundata</i> (Haw.) June 20–Sep. 13, 1991. . . . .	Count 181
7165	<i>Scopula quadrilineata</i> (Pack.) Aug. 7, 1992. . . . .	Count 1
7169	<i>Scopula inductata</i> (Gn.) May 30, 1991–Aug. 16, 1990. . . . .	Count 4
7189	<i>Dysstroma hersiliata</i> (Gn.) June 12, 1989–July 8, 1988. . . . .	Count 9
7196+	<i>Eulithis diversilineata</i> (Hbn.) June 27, 1991–Sep. 25, 1992. . . . .	Count 90
7284	<i>Eutrepisia inconstans</i> (Gey.) July 15, 1988. . . . .	Count 10
7307	<i>Mesoleuca ruficollata</i> (Gn.) June 5, 1992–Sep. 9, 1989. . . . .	Count 4
7329	<i>Anticlea vasilata</i> Gn. May 18, 1988. . . . .	Count 1
7333	<i>Stammodes gibbicostata</i> (Wlk.) Sep. 10, 1988. . . . .	Count 1
7368	<i>Xanthorhoe labradorensis</i> (Pack.) Aug. 2, 1991–Sep. 14, 1990. . . . .	Count 29
7371	<i>Xanthorhoe iduata</i> (Gn.) June 12–Sep. 4, 1992. . . . .	Count 2
7388	<i>Xanthorhoe ferrugata</i> (Cl.) June 20, 1991–Sep. 9, 1989. . . . .	Count 6
7390	<i>Xanthorhoe lacustrata</i> (Gn.) June 5, 1992–Sep. 7, 1990. . . . .	Count 38
7394	<i>Epirrhoe alternata</i> (Muller) June 1, 1990–Sep. 9, 1989. . . . .	Count 8
7399a	<i>Euphyia unangulata intermediata</i> (Gn.) June 6, 1991–Sep. 2, 1989. . . . .	Count 18
7414	<i>Orthonama obstepata</i> (F.) May 30–Sep. 6, 1991. . . . .	Count 99

7416	<i>Orthonama centrostrigaria</i> (Woll.) May 30, 1991–Sep. 14, 1990. . . . .	Count 338
7422	<i>Hydrelia inornata</i> (Hulst) May 30–Aug. 16, 1991. . . . .	Count 13
7423	<i>Hydrelia albifera</i> (Wlk.) June 6, 1991–Aug. 21, 1992. . . . .	Count 15
7430	<i>Trichodezia albivittata</i> (Gn.) July 12, 1991. . . . .	Count 1
7440	<i>Eubaphe mendica</i> (Wlk.) May 30, 1991–Aug. 27, 1992. . . . .	Count 184
7445	<i>Horisme intestinata</i> (Gn.) June 6, 1991–Sep. 2, 1989. . . . .	Count 15
7474+	<i>Eupithecia miserulata</i> Grt. May 18, 1988–Sep. 25, 1992. . . . .	Count 380
7640	<i>Lobophora nivigerata</i> Wlk. June 4, 1989. . . . .	Count 1
7645	<i>Heterophleps refusaria</i> (Wlk.) June 8, 1988. . . . .	Count 2
7647	<i>Heterophleps triguttaria</i> H.-S. June 5, 1992–Aug. 19, 1988. . . . .	Count 17
7648	<i>Dyspteris abortivaria</i> (H.-S.) June 15, 1988. . . . .	Count 1

#### Family APATELODIDAE

7663	<i>Apatelodes torrefacta</i> (J.E. Smith) June 19, 1989–July 24, 1992. . . . .	Count 14
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#### Family LASIOCAMPIDAE

7670	<i>Tolyte velleda</i> (Stoll) Sep. 7, 1990–Sep. 25, 1992. . . . .	Count 20
7673	<i>Tolyte laricis</i> (Fitch) July 12, 1991–Sep. 9, 1989. . . . .	Count 13
7698	<i>Malacosoma distria</i> Hbn. June 13, 1991–July 24, 1989. . . . .	Count 975
7701	<i>Malacosoma americanum</i> (F.) June 13, 1991–July 24, 1989. . . . .	Count 62

#### Family SATURNIIDAE

7715	<i>Dryocampa rubicunda</i> (F.) June 1–July 29, 1988. . . . .	Count 36
7746	<i>Automeris io</i> (F.) May 30, 1991–July 8, 1988. . . . .	Count 14
7757	<i>Antheraea polyphemus</i> (Cram.) June 6, 1991–July 29, 1988. . . . .	Count 12
7758	<i>Actias luna</i> (L.) May 28, 1989–July 15, 1988. . . . .	Count 15
7764	<i>Callosamia promethea</i> (Drury) May 30–June 27, 1991. . . . .	Count 2
7765	<i>Callosamia angulifera</i> (Wlk.) July 15, 1988. . . . .	Count 2
7767	<i>Hyalophora cecropia</i> (L.) June 1, 1990. . . . .	Count 1

#### Family SPHINGIDAE

7821	<i>Smerinthus jamaicensis</i> (Drury) June 4, 1989–July 26, 1991. . . . .	Count 2
7824	<i>Paonias excaecatus</i> (J.E. Smith) May 30, 1991–Aug. 5, 1988. . . . .	Count 60
7825	<i>Paonias myops</i> (J.E. Smith) May 30, 1991–July 29, 1988. . . . .	Count 15

7827	<i>Laotloe juglandis</i> (J.E. Smith)	
	May 28, 1992–July 17, 1989 . . . . .	Count 18
7828	<i>Pachysphinx modesta</i> (Harr.)	
	June 1, 1988 . . . . .	Count 1
7870	<i>Sphecodina abbottii</i> (Swainson)	
	June 1, 1988 . . . . .	Count 1
7871	<i>Deidamia inscripta</i> (Harr.)	
	May 28, 1992 . . . . .	Count 2

**Family NOTODONTIDAE**

7895	<i>Clostera albosigma</i> Fitch	
	June 22, 1988–Aug. 21, 1989 . . . . .	Count 3
7898	<i>Clostera strigosa</i> (Grt.)	
	June 1, 1988–Aug. 2, 1991 . . . . .	Count 7
7901	<i>Clostera apicalis</i> (Wlk.)	
	June 1, 1990–Aug. 21, 1989 . . . . .	Count 9
7902	<i>Datana ministra</i> (Drury)	
	June 15, 1988–July 24, 1989 . . . . .	Count 18
7903	<i>Datana angustii</i> G. & R.	
	June 1, 1990–July 24, 1989 . . . . .	Count 19
7906+	<i>Datana contracta</i> Wlk.	
	May 30, 1991–July 29, 1988 . . . . .	Count 22
7915	<i>Nadatra gibbosa</i> (J.E. Smith)	
	May 21, 1989–Aug. 24, 1990 . . . . .	Count 334
7919	<i>Peridea basitriens</i> (Wlk.)	
	May 30, 1991–Aug. 21, 1989 . . . . .	Count 127
7920	<i>Peridea angulosa</i> (J.E. Smith)	
	May 30, 1991–Sep. 9, 1989 . . . . .	Count 173
7922	<i>Pheosia rimosa</i> Pack.	
	June 27, 1991–Aug. 16, 1990 . . . . .	Count 8
7929	<i>Nerice bidentata</i> Wlk.	
	May 21, 1989–Aug. 24, 1990 . . . . .	Count 18
7930	<i>Ellida caniplaga</i> (Wlk.)	
	June 27, 1991–July 13, 1990 . . . . .	Count 6
7931	<i>Gluphisia septentrionis</i> Wlk.	
	June 22–July 29, 1988 . . . . .	Count 3
7936	<i>Furcula borealis</i> (Guer.-Meneville)	
	July 12, 1991–Aug. 16, 1990 . . . . .	Count 2
7939	<i>Furcula occidentalis</i> (Lint.)	
	July 29, 1988 . . . . .	Count 1
7951+	<i>Symmerista albifrons</i> (J.E. Smith)	
	May 30, 1991–Aug. 16, 1990 . . . . .	Count 93
7957	<i>Dasylophia anguina</i> (J.E. Smith)	
	Aug. 7, 1989 . . . . .	Count 1
7958	<i>Dasylophia thyatiroides</i> (Wlk.)	
	May 30, 1991–Aug. 16, 1990 . . . . .	Count 25
7975	<i>Macrurocampa marthesia</i> (Cram.)	
	June 20, 1991–Aug. 9, 1990 . . . . .	Count 169
7994	<i>Heterocampa guttivitta</i> (Wlk.)	
	May 21, 1989–July 15, 1988 . . . . .	Count 241
7995	<i>Heterocampa biundata</i> Wlk.	
	July 26, 1991–Aug. 9, 1990 . . . . .	Count 3
7998	<i>Lochnaeus manteo</i> Doubleday	
	June 1, 1990–Aug. 5, 1988 . . . . .	Count 31
7999	<i>Lochnaeus bilineata</i> (Pack.)	
	June 5, 1992–Aug. 24, 1990 . . . . .	Count 23
8005	<i>Schizura ipomoeae</i> Doubleday	
	June 5–Aug. 7, 1992 . . . . .	Count 4

8007	<i>Schizura unicoloris</i> (J.E. Smith)	
	May 30, 1991–Aug. 31, 1990 . . . . .	Count 57
8011	<i>Schizura leptinoides</i> (Grt.)	
	May 30, 1991–Aug. 21, 1989 . . . . .	Count 27
8012	<i>Oligocentria semirufescens</i> (Wlk.)	
	June 15–July 20, 1990 . . . . .	Count 7
8017	<i>Oligocentria lignicolor</i> (Wlk.)	
	June 15, 1990–Aug. 16, 1991 . . . . .	Count 14

**Family ARCTIIDAE**

8045.1	<i>Crambidia pallida</i> Pack.	
	July 22, 1988–Sep. 7, 1990 . . . . .	Count 37
8090	<i>Hypoprepia fusca</i> Hbn.	
	July 12, 1991 . . . . .	Count 1
8104	<i>Comachara cadburyi</i> Franc.	
	June 5, 1992 . . . . .	Count 1
8107	<i>Haploa clymene</i> (Brown)	
	July 5, 1991–July 31, 1992 . . . . .	Count 9
8121+	<i>Holomelina aurantiaca</i> (Hbn.)	
	May 30, 1991–Aug. 21, 1992 . . . . .	Count 366
8129	<i>Pyrrharetia isabella</i> (J.E. Smith)	
	May 30, 1991–Sep. 9, 1989 . . . . .	Count 41
8131	<i>Estigmene acrea</i> (Drury)	
	June 26, 1989 . . . . .	Count 1
8133	<i>Spilosoma latipennis</i> Stretch	
	May 30–Sep. 13, 1991 . . . . .	Count 112
8134	<i>Spilosoma congrua</i> Wlk.	
	May 21, 1989–July 17, 1992 . . . . .	Count 659
8137	<i>Spilosoma virginica</i> (F.)	
	May 28, 1989–Aug. 26, 1988 . . . . .	Count 60
8140	<i>Hyphantria cunea</i> (Drury)	
	May 30, 1991–July 10, 1992 . . . . .	Count 3
8156	<i>Phragmatobia fuliginosa</i> (L.)	
	July 31, 1989–Aug. 9, 1990 . . . . .	Count 2
8169+	<i>Apantesis phalerata</i> (Harr.)	
	May 28, 1992–Sep. 10, 1988 . . . . .	Count 102
8203+	<i>Halysidota tessellaris</i> (J.E. Smith)	
	June 6–Sep. 13, 1991 . . . . .	Count 611
8211	<i>Lophocampa caryae</i> Harr.	
	June 1, 1988–Sep. 4, 1992 . . . . .	Count 104
8230	<i>Cycnia tenera</i> Hbn.	
	June 20, 1991–Aug. 19, 1988 . . . . .	Count 7
8231	<i>Cycnia oregonensis</i> (Stretch)	
	June 1, 1990–Aug. 5, 1988 . . . . .	Count 6
8238	<i>Euchaetes egle</i> (Drury)	
	June 6, 1991–July 13, 1990 . . . . .	Count 10
8267	<i>Ciseps fulvicollis</i> (Hbn.)	
	May 30–Sep. 13, 1991 . . . . .	Count 44

**Family LYMANTRIIDAE**

8296	<i>Dasychira basiflava</i> (Pack.)	
	June 27, 1991–July 31, 1992 . . . . .	Count 22
8302	<i>Dasychira obliquata</i> (G. & R.)	
	July 26, 1991–Aug. 21, 1989 . . . . .	Count 2
8314	<i>Orgyia defuncta</i> Pack.	
	July 8, 1988–Sep. 14, 1990 . . . . .	Count 10
8316	<i>Orgyia leucostigma</i> (J.E. Smith)	
	June 20–Sep. 13, 1991 . . . . .	Count 4

- 8318 *Lymantria dispar* (L.)  
July 5, 1991–Sep. 4, 1992 . . . . . Count 351

# Family NOCTUIDAE

- 8322 *Idia americalis* (Gn.)  
May 30, 1991–Sep. 25, 1992 . . . . . Count 68
- 8323+ *Idia aemula* Hbn.  
June 6, 1991–Sep. 21, 1990 . . . . . Count 160
- 8326 *Idia rotundalis* (Wlk.)  
June 27, 1991–Sep. 4, 1992 . . . . . Count 601
- 8327 *Idia forbesi* (French)  
June 27, 1991–Aug. 21, 1992 . . . . . Count 150
- 8329 *Idia diminuendis* (B. & McD.)  
June 27, 1991–Aug. 27, 1992 . . . . . Count 176
- 8330 *Idia scobialis* (Grt.)  
July 13–Aug. 16, 1990 . . . . . Count 28
- 8333 *Idia denticulalis* (Harv.)  
July 8, 1988–Sep. 7, 1990 . . . . . Count 10
- 8334 *Idia lubricalis* (Gey.)  
July 4–Sep. 9, 1989 . . . . . Count 77
- 8338 *Phalaenophana pyramusalis* (Wlk.)  
June 1–Sep. 10, 1988 . . . . . Count 9
- 8340 *Zanclognatha lituralis* (Hbn.)  
June 6, 1991–Aug. 24, 1990 . . . . . Count 40
- 8345 *Zanclognatha laevigata* (Grt.)  
July 8, 1988–Sep. 9, 1989 . . . . . Count 86
- 8347 *Zanclognatha obscuripennis* (Grt.)  
Sep. 13, 1991 . . . . . Count 1
- 8348 *Zanclognatha pedipalis* (Gn.)  
June 12–Aug. 21, 1989 . . . . . Count 5
- 8349 *Zanclognatha protamnusalis* (Wlk.)  
July 5, 1991–Aug. 16, 1990 . . . . . Count 10
- 8351 *Zanclognatha cruralis* (Gn.)  
June 26, 1989–Aug. 9, 1990 . . . . . Count 12
- 8352+ *Zanclognatha jachusalis* (Wlk.)  
June 19, 1989–Sep. 21, 1990 . . . . . Count 383
- 8355 *Chytolita morbidalis* (Gn.)  
June 1–July 22, 1988 . . . . . Count 64
- 8356 *Chytolita petrealis* Grt.  
June 20, 1991–July 24, 1992 . . . . . Count 11
- 8357 *Macrochilo absorptalis* (Wlk.)  
June 22, 1988 . . . . . Count 2
- 8357.1 *Macrochilo hypocritalis* Fgn.  
July 10, 1989–Aug. 27, 1992 . . . . . Count 4
- 8358 *Macrochilo litophora* (Grt.)  
June 20, 1991–Aug. 5, 1988 . . . . . Count 19
- 8362 *Phalaenostola metonalis* (Wlk.)  
May 30, 1991–Aug. 26, 1988 . . . . . Count 20
- 8363 *Phalaenostola emelusalis* (Wlk.)  
June 27, 1991–Sep. 7, 1990 . . . . . Count 5
- 8364 *Phalaenostola larentioides* Grt.  
July 5–Aug. 2, 1991 . . . . . Count 6
- 8366 *Tetanolia mynesalis* (Wlk.)  
July 5, 1991 . . . . . Count 1
- 8368 *Tetanolia floridana* (Sm.)  
Aug. 2, 1991 . . . . . Count 1
- 8370 *Bleptina caradrinalis* Gn.  
June 22–Aug. 3, 1990 . . . . . Count 21

- 8378 *Renia salusalis* (Wlk.)  
July 5, 1991–July 17, 1992 . . . . . Count 3
- 8379 *Renia factiosalis* (Wlk.)  
July 12, 1991–Sep. 4, 1992 . . . . . Count 147
- 8381 *Renia discoloralis* Gn.  
July 12, 1991–Sep. 9, 1989 . . . . . Count 54
- 8384.1 *Renia flavipunctalis* (Gey.)  
July 31, 1989 . . . . . Count 1
- 8386 *Renia adspersigillus* (Bosc)  
June 22, 1988–Aug. 21, 1992 . . . . . Count 8
- 8387 *Renia sobrialis* (Wlk.)  
June 20, 1991–July 31, 1989 . . . . . Count 9
- 8393 *Lascoria ambigualis* Wlk.  
June 22, 1988–July 27, 1990 . . . . . Count 7
- 8397 *Palthis angularis* (Hbn.)  
June 1, 1988–Sep. 9, 1989 . . . . . Count 23
- 8398 *Palthis asopialis* (Gn.)  
May 30, 1991–Sep. 21, 1990 . . . . . Count 52
- 8401 *Redectis vitrea* (Grt.)  
Sep. 9, 1989 . . . . . Count 1
- 8404 *Rivula propinquialis* Gn.  
May 30, 1991–Aug. 24, 1990 . . . . . Count 47
- 8412 *Melanomna auricinctaria* Grt.  
May 30, 1991–Aug. 24, 1990 . . . . . Count 8
- 8420 *Hypenodes caducus* (Dyar)  
July 5, 1991 . . . . . Count 1
- 8421 *Hypenodes fractilinea* (Sm.)  
May 30, 1991–Sep. 4, 1992 . . . . . Count 147
- 8426 *Dyspyralis illocata* Warr.  
July 12, 1991–July 27, 1990 . . . . . Count 14
- 8427 *Dyspyralis puncticosta* (Sm.)  
July 5, 1991–Aug. 27, 1992 . . . . . Count 39
- 8428 *Dyspyralis nigella* (Stkr.)  
July 12, 1991–Aug. 21, 1992 . . . . . Count 20
- 8441 *Bomolocha manalis* (Wlk.)  
June 15, 1990–Sep. 9, 1989 . . . . . Count 18
- 8442 *Bomolocha baltimoralis* (Gn.)  
June 1, 1990–Sep. 10, 1992 . . . . . Count 72
- 8443 *Bomolocha bijugalis* (Wlk.)  
July 12–July 26, 1991 . . . . . Count 2
- 8444 *Bomolocha palparia* (Wlk.)  
June 15, 1988–Aug. 24, 1990 . . . . . Count 11
- 8445 *Bomolocha abalienalis* (Wlk.)  
July 8, 1988–Aug. 21, 1992 . . . . . Count 11
- 8446 *Bomolocha deceptalis* (Wlk.)  
June 6, 1991–Sep. 7, 1990 . . . . . Count 9
- 8447 *Bomolocha madefactalis* (Gn.)  
June 22, 1988–Sep. 7, 1990 . . . . . Count 8
- 8448 *Bomolocha sordidula* (Grt.)  
June 22, 1988–Sep. 9, 1989 . . . . . Count 3
- 8452 *Bomolocha edictalis* (Wlk.)  
Aug. 3, 1990–Aug. 16, 1991 . . . . . Count 4
- 8465 *Plathypena scabra* (F.)  
June 6, 1991–Sep. 24, 1988 . . . . . Count 68
- 8479 *Spargaloma sexpunctata* Grt.  
May 30, 1991–Aug. 21, 1992 . . . . . Count 14
- 8490 *Pangrapta decoralis* Hbn.  
July 5, 1991 . . . . . Count 1

8491	<i>Ledaea perditalis</i> (Wlk.) May 30, 1991–July 20, 1990. . . . .	Count 7
8499	<i>Metalectra discalis</i> (Grt.) June 27, 1991–Aug. 27, 1992. . . . .	Count 8
8500	<i>Metalectra quadrisignata</i> (Wlk.) July 27–Aug. 24, 1990. . . . .	Count 2
8514	<i>Scolecocampa liburnia</i> (Gey.) June 20, 1991–July 31, 1989. . . . .	Count 25
8555	<i>Scoliopteryx libatrix</i> (L.) July 8, 1988–Aug. 24, 1990. . . . .	Count 3
8587	<i>Panopoda rufimargo</i> (Hbn.) June 15, 1988–Aug. 7, 1992. . . . .	Count 97
8588	<i>Panopoda carneicosta</i> Gn. July 8, 1988–July 13, 1990. . . . .	Count 3
8689	<i>Zale lunata</i> (Drury) Sep. 21, 1990. . . . .	Count 1
8697	<i>Zale minerea</i> (Gn.) May 30, 1991–July 15, 1988. . . . .	Count 23
8704+	<i>Zale helata</i> (Sm.) June 8, 1990. . . . .	Count 1
8716	<i>Zale unilineata</i> (Grt.) June 15, 1988. . . . .	Count 1
8717	<i>Zale horrida</i> Hbn. June 12, 1989–July 19, 1991. . . . .	Count 5
8719	<i>Euparthenos umbilis</i> (Hbn.) June 26, 1989–July 24, 1992. . . . .	Count 4
8721	<i>Allotria elonympha</i> (Hbn.) June 1, 1988–July 4, 1989. . . . .	Count 8
8727	<i>Parallelia bistriaris</i> Hbn. June 1, 1988–Aug. 24, 1990. . . . .	Count 30
8738+	<i>Caenurgina crassiuscula</i> (Haw.) June 27, 1991–Sep. 10, 1988. . . . .	Count 17
8771	<i>Catocala piatrix</i> Grt. Sep. 9, 1989. . . . .	Count 1
8778	<i>Catocala habilis</i> Grt. Sep. 7, 1990–Sep. 13, 1991. . . . .	Count 2
8784	<i>Catocala obscura</i> Stkr. Sep. 2, 1989. . . . .	Count 1
8788	<i>Catocala relecta</i> Grt. Aug. 16–Sep. 21, 1990. . . . .	Count 12
8792	<i>Catocala vidua</i> (J.E. Smith) Sep. 7, 1990–Sep. 9, 1989. . . . .	Count 2
8795	<i>Catocala palaeogama</i> Gn. Aug. 27, 1992–Sep. 21, 1990. . . . .	Count 4
8796	<i>Catocala nebulosa</i> Edw. Sep. 2, 1989. . . . .	Count 1
8797	<i>Catocala subnata</i> Grt. July 12, 1991–Sep. 25, 1992. . . . .	Count 9
8798	<i>Catocala neogama</i> (J.E. Smith) July 31, 1989–Sep. 21, 1990. . . . .	Count 2
8801	<i>Catocala ilia</i> (Cram.) July 8, 1988–Aug. 27, 1992. . . . .	Count 16
8802	<i>Catocala cerogama</i> Gn. Aug. 24, 1990–Sep. 25, 1992. . . . .	Count 3
8832	<i>Catocala cara</i> Gn. Aug. 5, 1988–Sep. 9, 1989. . . . .	Count 4
8846	<i>Catocala sordida</i> Grt. Aug. 3, 1990. . . . .	Count 1
8851	<i>Catocala coccinata</i> Grt. July 8, 1988. . . . .	Count 1
8857	<i>Catocala ultronia</i> (Hbn.) July 5, 1991–Sep. 7, 1990. . . . .	Count 34
8858	<i>Catocala crataegi</i> Saund. July 20, 1990. . . . .	Count 1
8863	<i>Catocala mitra</i> Grt. July 5, 1991–Aug. 27, 1992. . . . .	Count 10
8864	<i>Catocala grynea</i> (Cram.) July 5, 1991–Sep. 9, 1989. . . . .	Count 64
8867	<i>Catocala blandula</i> Hulst July 8, 1988–Aug. 7, 1992. . . . .	Count 4
8878	<i>Catocala amica</i> (Hbn.) Aug. 16–Sep. 14, 1990. . . . .	Count 4
8878.1	<i>Catocala lineella</i> Grt. Aug. 27, 1992–Sep. 9, 1989. . . . .	Count 3
8881	<i>Abrostola urentis</i> Gn. June 27, 1991–Aug. 21, 1989. . . . .	Count 8
8887	<i>Trichophusia ni</i> (Hbn.) Sep. 10, 1988. . . . .	Count 1
8890	<i>Pseudophusia includens</i> (Wlk.) June 1, 1988. . . . .	Count 1
8898	<i>Allagrapha aerea</i> (Hbn.) June 6, 1991–Sep. 14, 1990. . . . .	Count 28
8904	<i>Chrysanympa formosa</i> (Grt.) July 13, 1990. . . . .	Count 1
8905	<i>Eosiphropteryx thyatroides</i> (Gn.) July 20, 1990. . . . .	Count 1
8908	<i>Autographa precationis</i> (Gn.) May 18, 1988–Sep. 25, 1992. . . . .	Count 43
8924	<i>Anagrapha falcifera</i> (Kby.) June 1, 1988–Aug. 2, 1991. . . . .	Count 8
8955	<i>Marathyssa inficita</i> (Wlk.) June 22, 1988–Sep. 9, 1989. . . . .	Count 9
8956	<i>Marathyssa basalis</i> Wlk. May 28, 1989. . . . .	Count 2
8957	<i>Paectes oculatrix</i> (Gn.) June 6, 1991–Aug. 26, 1988. . . . .	Count 19
8970	<i>Baileya ophthaluica</i> (Gn.) May 18, 1988–June 26, 1989. . . . .	Count 56
8971	<i>Baileya doruntans</i> (Gn.) May 30–July 19, 1991. . . . .	Count 24
8972	<i>Baileya levians</i> (Sm.) May 28–July 31, 1989. . . . .	Count 22
8973	<i>Baileya australis</i> (Grt.) June 1, 1988–July 12, 1991. . . . .	Count 2
8983	<i>Meganola minuscula</i> (Zell.) May 30, 1991–Aug. 14, 1989. . . . .	Count 37
8983.1	<i>Meganola phylla</i> (Dyar) May 30, 1991–Aug. 3, 1990. . . . .	Count 11
9037	<i>Hyperstrotia pervertens</i> (B. & McD.) June 13, 1991–July 27, 1990. . . . .	Count 80
9040	<i>Hyperstrotia secta</i> (Grt.) June 20, 1991–Aug. 5, 1988. . . . .	Count 4
9044	<i>Thioptera uigrofimbria</i> (Gn.) July 10, 1992. . . . .	Count 1
9047	<i>Lithacodia muscosa</i> (Gn.) June 6, 1991–Aug. 21, 1989. . . . .	Count 308

9048	<i>Lithacodia albidula</i> (Gn.) June 27–July 19, 1991 . . . . .	Count 5	9254	<i>Acronicta afflicta</i> Grt. May 30, 1991 . . . . .	Count 1
9051	<i>Lithacodia musta</i> (G. & R.) June 22, 1990–July 29, 1988 . . . . .	Count 2	9261	<i>Acronicta impressa</i> Wlk. July 27, 1990–Aug. 7, 1989 . . . . .	Count 2
9053	<i>Pseudeustrotia carneola</i> (Gn.) May 30–Sep. 13, 1991 . . . . .	Count 412	9272	<i>Acronicta obliuina</i> (J.E. Smith) June 1, 1990–July 31, 1989 . . . . .	Count 3
9055.1	<i>Maliattha synochitis</i> (G. & R.) May 30, 1991–July 22, 1988 . . . . .	Count 47	9285	<i>Polygrammate hebraeicum</i> Hbn. May 30, 1991–July 27, 1990 . . . . .	Count 18
9056	<i>Homophoberia cristata</i> Morr. July 12, 1991 . . . . .	Count 1	9299	<i>Eudryas unio</i> (Hbn.) Aug. 16, 1990 . . . . .	Count 1
9057	<i>Homophoberia apicosa</i> (Haw.) June 8, 1990–Sep. 9, 1989 . . . . .	Count 41	9301	<i>Eudryas grata</i> (F.) May 30, 1991–Aug. 14, 1989 . . . . .	Count 34
9062	<i>Cerma cerintha</i> (Tr.) June 15, 1988–July 12, 1991 . . . . .	Count 16	9332	<i>Apamea vulgaris</i> (G. & R.) May 28, 1989 . . . . .	Count 1
9065	<i>Leuconycta diphteroides</i> (Gn.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 36	9341	<i>Apamea vultuosa</i> (Grt.) June 6, 1991 . . . . .	Count 2
9066	<i>Leuconycta lepidula</i> (Grt.) May 30, 1991–Sep. 9, 1989 . . . . .	Count 9	9364	<i>Apamea sordens</i> (Hufn.) June 12, 1989–June 15, 1988 . . . . .	Count 2
9090	<i>Tarachidia caudifacta</i> (Hbn.) June 29, 1990–Aug. 26, 1988 . . . . .	Count 19	9367	<i>Apamea dubitans</i> (Wlk.) Aug. 31, 1990–Sep. 9, 1989 . . . . .	Count 2
9095	<i>Tarachidia erastrioides</i> (Gn.) May 30, 1991–Sep. 7, 1990 . . . . .	Count 48	9382	<i>Apamea devastator</i> (Brace) June 15, 1988 . . . . .	Count 2
9127	<i>Spragueia leo</i> (Gn.) July 27, 1990 . . . . .	Count 1	9404	<i>Oligia modica</i> (Gn.) Aug. 2, 1991–Aug. 31, 1990 . . . . .	Count 21
9184	<i>Colocasia flavicornis</i> (Sm.) July 12, 1991–Aug. 5, 1988 . . . . .	Count 28	9406	<i>Oligia fractilinea</i> (Grt.) July 19–Aug. 30, 1991 . . . . .	Count 15
9185	<i>Colocasia propinquilinea</i> (Grt.) May 28, 1989–Aug. 9, 1990 . . . . .	Count 186	9408	<i>Oligia exhausta</i> (Sm.) June 22, 1988–July 5, 1991 . . . . .	Count 2
9189	<i>Charadra deridens</i> (Gn.) June 1, 1988–Aug. 14, 1989 . . . . .	Count 5	9415	<i>Oligia bridghamii</i> (G.&R.) July 19, 1991 . . . . .	Count 1
9193	<i>Raphia frater</i> Grt. May 30–Aug. 2, 1991 . . . . .	Count 15	9419	<i>Oligia mactata</i> (Gn.) July 3, 1992–Sep. 21, 1990 . . . . .	Count 2
9200	<i>Acronicta americana</i> (Harr.) May 30, 1991–July 17, 1989 . . . . .	Count 9	9427	<i>Meropleon diversicolor</i> (Morr.) Sep. 9, 1989 . . . . .	Count 1
9203	<i>Acronicta dactylina</i> Grt. June 15, 1988–Aug. 3, 1990 . . . . .	Count 3	9449	<i>Archana oblonga</i> (Grt.) July 19, 1991–Aug. 9, 1990 . . . . .	Count 3
9227	<i>Acronicta laetifica</i> Sm. June 15, 1988 . . . . .	Count 1	9454	<i>Amphipoea velata</i> (Wlk.) June 27, 1991–July 27, 1990 . . . . .	Count 25
9229	<i>Acronicta hasta</i> Gn. June 1, 1988–Aug. 27, 1992 . . . . .	Count 15	9457+	<i>Amphipoea americana</i> (Speyer) July 20, 1990–Sep. 4, 1992 . . . . .	Count 4
9235	<i>Acronicta spinigera</i> Gn. May 30, 1991–July 15, 1988 . . . . .	Count 26	9471	<i>Papaipema arctivorens</i> Hamp. Aug. 31–Sep. 21, 1990 . . . . .	Count 4
9236	<i>Acronicta morula</i> (G. & R.) June 1, 1988 . . . . .	Count 1	9473	<i>Papaipema impecuniosa</i> (Grt.) Sep. 25, 1992 . . . . .	Count 1
9237	<i>Acronicta interrupta</i> Gn. July 31, 1989–Aug. 16, 1990 . . . . .	Count 3	9483	<i>Papaipema inquaesita</i> (G. & R.) Aug. 19, 1988–Sep. 14, 1990 . . . . .	Count 6
9238	<i>Acronicta lobeliae</i> Gn. June 1–Aug. 16, 1990 . . . . .	Count 3	9485	<i>Papaipema baptisiae</i> (Bird) Sep. 10, 1988–Sep. 21, 1990 . . . . .	Count 6
9243	<i>Acronicta ovata</i> Grt. June 6, 1991–Aug. 5, 1988 . . . . .	Count 13	9505	<i>Papaipema cerussata</i> (Grt.) Sep. 10, 1988–Sep. 25, 1992 . . . . .	Count 7
9244	<i>Acronicta modia</i> Wlk. June 12, 1989–July 8, 1988 . . . . .	Count 4	9520	<i>Achatodes zeae</i> (Harr.) July 15, 1988–Aug. 21, 1992 . . . . .	Count 11
9245+	<i>Acronicta haesitata</i> (Grt.) May 30–Aug. 16, 1991 . . . . .	Count 374	9523	<i>Bellura gortynoides</i> (Wlk.) Aug. 3, 1990 . . . . .	Count 1
9246	<i>Acronicta clarescens</i> Gn. Sep. 2, 1989 . . . . .	Count 1	9525	<i>Bellura obliqua</i> (Wlk.) May 28, 1992–Aug. 14, 1989 . . . . .	Count 16
9251	<i>Acronicta retardata</i> (Wlk.) June 6–July 19, 1991 . . . . .	Count 7	9526	<i>Behura densa</i> (Wlk.) June 15, 1988–Aug. 14, 1989 . . . . .	Count 7



9545	<i>Enplexia benesimilis</i> McD. May 30–Sep. 13, 1991.....	Count 82
9546	<i>Phlogophora iris</i> Gn. June 15, 1988.....	Count 1
9547	<i>Phlogophora periculosa</i> Gn. Aug. 14, 1989–Sep. 10, 1988.....	Count 30
9551	<i>Eiargia mephisto</i> Franc. July 3, 1992.....	Count 1
9555	<i>Ipinorpha pleonectusa</i> Grt. July 19, 1991–Aug. 31, 1990.....	Count 8
9556	<i>Chytonix palliatricula</i> (Gn.) May 30, 1991–July 31, 1989.....	Count 94
9578	<i>Hypna xylinoides</i> (Gn.) May 30, 1991–Aug. 31, 1990.....	Count 30
9582	<i>Nedra ramosula</i> (Gn.) Aug. 2, 1991.....	Count 1
9618	<i>Phosphila turbulenta</i> Hbn. July 5, 1991–July 15, 1988.....	Count 6
9619	<i>Phosphila miselioides</i> (Gn.) July 12, 1991.....	Count 1
9631	<i>Callopietria mollissima</i> (Gn.) June 1, 1990–Aug. 2, 1991.....	Count 12
9638	<i>Amphipyra pyramioides</i> Gn. July 22, 1988–Sep. 25, 1992.....	Count 133
9647	<i>Athetis miranda</i> (Grt.) July 19, 1991–Aug. 14, 1989.....	Count 3
9650	<i>Anorthodes tarda</i> (Gn.) May 28–Sep. 25, 1992.....	Count 99
9662	<i>Balsa malana</i> (Fitch) July 27, 1990–Aug. 14, 1989.....	Count 2
9663	<i>Balsa tristigella</i> (Wlk.) May 30–July 12, 1991.....	Count 52
9664	<i>Balsa labecula</i> (Grt.) May 30, 1991–July 29, 1988.....	Count 25
9666	<i>Spodoptera frugiperda</i> (J.E. Smith) Aug. 26, 1988–Sep. 14, 1990.....	Count 3
9669	<i>Spodoptera ornithogalli</i> (Gn.) Aug. 26, 1988.....	Count 1
9678	<i>Elaphria versicolor</i> (Grt.) June 13, 1991–July 20, 1990.....	Count 12
9681	<i>Elaphria festivoidea</i> (Gn.) June 26–July 4, 1989.....	Count 3
9688	<i>Galgula partita</i> Gn. June 15–July 15, 1988.....	Count 5
9689	<i>Perigea xanthioides</i> Gn. May 30, 1991–Sep. 10, 1988.....	Count 49
9690	<i>Condica videns</i> (Gn.) July 24, 1989–Aug. 19, 1988.....	Count 2
9696	<i>Condica vecors</i> (Gn.) June 5, 1992–Aug. 21, 1989.....	Count 19
9720	<i>Ogdoconta citreolea</i> (Gn.) June 1, 1990–Sep. 9, 1989.....	Count 87
9815	<i>Cosmia calami</i> (Harv.) July 20, 1990–July 24, 1989.....	Count 7
9818	<i>Amolita fessa</i> Grt. June 20, 1991–July 17, 1992.....	Count 13
9952	<i>Eucirroedia pampina</i> (Gn.) Sep. 14, 1990.....	Count 1
9957	<i>Sutira bicolorago</i> (Gn.) Sep. 25, 1992.....	Count 1
9961	<i>Anathix ralla</i> (G. & R.) Aug. 14, 1989–Sep. 25, 1992.....	Count 141
10033	<i>Catabena lineolata</i> Wlk. May 21, 1989.....	Count 1
10059	<i>Homohadena badistriga</i> (Grt.) July 22, 1988.....	Count 1
10202	<i>Cucullia convexipennis</i> G. & R. Aug. 16, 1990.....	Count 1
10276	<i>Polia imbrifera</i> (Gn.) June 20, 1991–Aug. 14, 1989.....	Count 4
10288+	<i>Polia purpurisata</i> (Grt.) May 30, 1991–Aug. 9, 1990.....	Count 497
10292	<i>Melanchra adjuncta</i> (Gn.) May 28–Aug. 14, 1989.....	Count 8
10293	<i>Melanchra picta</i> (Harr.) June 22, 1988–Aug. 16, 1990.....	Count 3
10299	<i>Lacanobia subnigra</i> (G. & R.) June 8, 1988–Aug. 27, 1992.....	Count 6
10300	<i>Spiramater grandis</i> (Gn.) June 6, 1991.....	Count 1
10304	<i>Trichordestra legitima</i> (Grt.) June 15–July 8, 1988.....	Count 2
10348	<i>Lasiestra poca</i> (B. & Benj.) July 24, 1992.....	Count 4
10397	<i>Laciniipolia renigera</i> (Steph.) May 30–Sep. 13, 1991.....	Count 46
10405	<i>Laciniipolia lorea</i> (Gn.) May 30, 1991–July 10, 1992.....	Count 29
10436	<i>Aletia oxygala</i> (Grt.) May 30, 1991–Sep. 9, 1989.....	Count 14
10438	<i>Pseudaleia unipuncta</i> (Haw.) May 18–Sep. 10, 1988.....	Count 96
10444+	<i>Leucania phragmatidicola</i> Gn. June 1–Sep. 10, 1988.....	Count 9
10446+	<i>Leucania multilinea</i> Wlk. May 30–Aug. 30, 1991.....	Count 12
10447	<i>Leucania commoides</i> Gn. July 19, 1991–Aug. 16, 1990.....	Count 4
10461+	<i>Leucania ursula</i> (Fbs.) June 6, 1991–Sep. 9, 1989.....	Count 72
10501	<i>Crocigrapha normani</i> (Grt.) May 18, 1988.....	Count 1
10521	<i>Morrisonia confusa</i> (Hbn.) May 18–June 15, 1988.....	Count 8
10521.1	<i>Morrisonia latex</i> (Gn.) June 1–July 22, 1988.....	Count 53
10524	<i>Nephelodes minians</i> Gn. Aug. 21, 1989–Sep. 25, 1992.....	Count 108
10532	<i>Homorthodes furfurata</i> (Grt.) June 27, 1991–July 27, 1990.....	Count 30
10563	<i>Protorthodes oviduca</i> (Gn.) June 12, 1992.....	Count 1
10578	<i>Pseudorthodes vecors</i> (Gn.) May 30, 1991–Sep. 4, 1992.....	Count 144
10585	<i>Orthodes creunata</i> (Butler) June 22, 1988–Aug. 16, 1991.....	Count 19

10587	<i>Orthodes cynica</i> Gn. May 30, 1991–July 17, 1992. . . . .	Count 297
10627	<i>Tricholita signata</i> (Wlk.) Aug. 9, 1990–Sep. 10, 1988. . . . .	Count 14
10648	<i>Agrotis gladiaria</i> Morr. Sep. 14, 1990. . . . .	Count 1
10651	<i>Agrotis venerabilis</i> Wlk. Sep. 21, 1990–Sep. 25, 1992. . . . .	Count 7
10663	<i>Agrotis ipsilon</i> (Hufn.) May 28, 1992–Sep. 10, 1988. . . . .	Count 216
10674+	<i>Feltia subgothica</i> (Haw.) Aug. 2, 1991–Aug. 27, 1992. . . . .	Count 25
10676	<i>Feltia herilis</i> (Grt.) July 31, 1989–Sep. 14, 1990. . . . .	Count 73
10698.2	<i>Trichosilia geniculata</i> (G. & R.) Aug. 2, 1991–Sep. 10, 1988. . . . .	Count 5
10793	<i>Euxoa scholastica</i> McD. July 8–July 22, 1988. . . . .	Count 3
10870	<i>Richia acclivis</i> (Morr.) Aug. 21, 1989. . . . .	Count 1
10891	<i>Ochropleura plecta</i> (L.) May 30, 1991–Sep. 25, 1992. . . . .	Count 223
10903+	<i>Euagrotis illapsa</i> (Wlk.) July 19, 1991–Aug. 19, 1988. . . . .	Count 3
10911	<i>Anicla infecta</i> (Ochs.) July 19, 1991. . . . .	Count 1
10915	<i>Peridroma saucia</i> (Ochs.) July 5, 1991–Sep. 25, 1992. . . . .	Count 7
10917	<i>Diarsia rubifera</i> (Grt.) June 29, 1990. . . . .	Count 1
10926	<i>Spaelotis clandestina</i> (Harr.) June 22, 1990. . . . .	Count 1
10942.1+	<i>Xestia dolosa</i> Franc. May 28, 1989–Sep. 25, 1992. . . . .	Count 682
10943	<i>Xestia normaniana</i> (Grt.) Aug. 3–Sep. 21, 1990. . . . .	Count 157
10944	<i>Xestia smithii</i> (Snell.) Aug. 23, 1991–Sep. 14, 1990. . . . .	Count 23
10950+	<i>Xestia bicarnea</i> (Gn.) Aug. 2–Sep. 13, 1991. . . . .	Count 119
10954	<i>Xestia bugrai</i> Kocak Sep. 25, 1992. . . . .	Count 1
10998	<i>Choephora fungorum</i> G. & R. Sep. 7–Sep. 21, 1990. . . . .	Count 6
11006	<i>Protolampra brunneicollis</i> (Grt.) June 22, 1990–Sep. 9, 1989. . . . .	Count 13
11007+	<i>Eueretagrotis sigmoides</i> (Gn.) July 8–July 22, 1988. . . . .	Count 5
11010	<i>Heptagrotis phyllophora</i> (Grt.) June 26–Sep. 9, 1989. . . . .	Count 4
11012	<i>Cryptocala acadensis</i> (Bethune) July 20, 1990. . . . .	Count 1
11029+	<i>Abagrotis alternata</i> (Grt.) June 13, 1991–Sep. 25, 1992. . . . .	Count 69